

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

REC'D 06 JUN 2005

PCT

PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/IB2005/050981

International filing date (day/month/year)  
22.03.2005

Priority date (day/month/year)  
31.03.2004

International Patent Classification (IPC) or both national classification and IPC  
G11B7/135, G02B3/14

Applicant  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/050981

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/050981

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Yes: Claims | 1-8 |
|                               | No: Claims  |     |
| Inventive step (IS)           | Yes: Claims | 1-8 |
|                               | No: Claims  |     |
| Industrial applicability (IA) | Yes: Claims | 1-8 |
|                               | No: Claims  |     |

2. Citations and explanations

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rules 43bis.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

**see form 210**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1 : WO -A- 03069380

D2 : WO -A- 0173775 (referenced and acknowledged in D1, cf. page 8, l. 11)

D3 : US -A- 6 388 822

The following statements are based on clarified subject-matter (cf. Section VIII below):

2. D1 (cf. Figure 5) and the reference D2 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to these documents):
- an optical scanning device for scanning an information layer (cf. D1, 206) by means of a radiation beam, the device comprising a radiation source for emitting said radiation beam, an objective (cf. D1, 202, 204) for converting said radiation beam to a scanning spot at the position of said information layer, mounting means (cf. D2: actuator 57, Figure 2) to adjust the distance between the radiation source and the objective (cf. D1, 202) and an optical component (200) is provided in the light path between a collimator lens (cf. D2, Figure 2, 43) for collimating said radiation beam and the objective (cf. D1, 202, 204).

The subject-matter of claim 1 differs from this known of D1 and D2 in the characterizing part of claim 1.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

3. The problem to be solved by the present invention may be regarded as providing a constant rim intensity of the radiation beam over the entrance pupil of the objective, when changing the vergence of the radiation beam between the collimator lens and the objective as occurs in split optic systems during reading different tracks.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

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The solution to this problem proposed in claim 1 (cf. in particular the characterizing part) of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

D1, D2 and D3 do not relate to split optic arrangements. D1 relates to an optical scanning device wherein the vergence of the radiation beam entering the objective is switched by using a variable focus lens based on an electrowetting effect to compensate for spherical aberration when reading a dual layer disc. The problem imposed by a changing distance between collimator lens and objective lens in split optics is not addressed. D3 discloses the importance of suppressing the reduction of light amount at the lens rim to achieve an acceptable small light spot diameter.

Claims 2-8 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**Re Item VI**

**Certain documents cited**

**Certain published documents**

| Application No<br>Patent No | Publication date<br>(day/month/year) | Filing date<br>(day/month/year) | Priority date (valid claim)<br>(day/month/year) |
|-----------------------------|--------------------------------------|---------------------------------|---|
| WO 2004/027769              | 1/4/2004                             | 12/09/2003                      | 19/09/2002                                      |

This document discloses to vary the rim intensity of the light beam according to the writing and reading mode.

**Re Item VII**

**Certain defects in the international application**

The documents D1-D3 have not been identified in the description nor has the relevant background art disclosed therein been discussed. The requirements of Rule 5.1(a)(ii) PCT are, thus, not fulfilled.

The description is not in conformity with the clarified independent claim 1. Thus, the requirements of Rule 5.1 (a)(ii)(iii) PCT are not fulfilled.

**Re Item VIII**

**Certain observations on the international application**

It is clear from the figures and the description (cf. Figures 2A,B and page 7, line 9 et seq.) that the following feature is essential to the definition of the invention:

The optical component (6) is provided in the light path between a collimator lens for collimating said radiation beam (3,5,30,30') and the objective (7,90).

There is no support for other arrangements.

Since independent claim 1 does not contain this feature it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

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| Industrial applicability (IA) | Yes: Claims | 1-8 |
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2. Citations and explanations

**see separate sheet**

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